09713569 "44400

```
                11          20          29          38          47          56
5' CGGGC GCG GAG GTA CGC TGA GTG GAG CTC GGG GCT GCG TAG GGG AGC TGA GCC GAG

                65          74          83          92         101         110
    CGG CTG GGC GGG CCT GGC CGG GCC AGC GGA GGG GAG ACG TCG GTT GAG CGG CGG

               119         128         137         146         155         164
    CGA ACA TGC GCT TTT GAC ACA TTG GAG GCT TTC TTG ATC ATG GAT GGT GAA GAT
                                                    M   D   G   E   D

               173         182         191         200         209         218
    ATA CCA GAT TTT TCA AGT TTA AAG GAG GAA ACT GCT TAT TGG AAG GAA CTT TCC
    I   P   D   F   S   S   L   K   E   E   T   A   Y   W   K   E   L   S

               227         236         245         254         263         272
    TTG AAG TAT AAG CAA AGC TTC CAG GAA GCT CGG GAT GAG CTA GTT GAA TTC CAG
    L   K   Y   K   Q   S   F   Q   E   A   R   D   E   L   V   E   F   Q

               281         290         299         308         317         326
    GAA GGA AGC AGA GAA TTA GAA GCA GAG TTG GAG GCA CAA TTA GTA CAG GCT GAA
    E   G   S   R   E   L   E   A   E   L   E   A   Q   L   V   Q   A   E

               335         344         353         362         371         380
    CAA AGA AAT AGA GAC TTG CAG GCT GAT AAC CAA AGA CTG AAA TAT GAA GTG GAG
    Q   R   N   R   D   L   Q   A   D   N   Q   R   L   K   Y   E   V   E
```

FIGURE1A

00hTFF"699ETZ60

```
         389        398        407        416        425        434
GCA TTA AAG GAG AAG CTA GAG CAT CAA TAT GCA CAG AGC TAT AAG CAG GTC TCA
A   L   K   E   K   L   E   H   Q   Y   A   Q   S   Y   K   Q   V   S

         443        452        461        470        479        488
GTG TTA GAA GAT GAT TTA AGT CAG ACT CGG GCC ATT AAG GAG CAG TTG CAT AAG
V   L   E   D   D   L   S   Q   T   R   A   I   K   E   Q   L   H   K

         497        506        515        524        533        542
TAT GTG AGA GAG CTG GAG CAG GCC AAC GAC GAC CTG GAG CGA GCC AAA AGG GCA
Y   V   R   E   L   E   Q   A   N   D   D   L   E   R   A   K   R   A

         551        560        569        578        587        596
ACA ATA GTT TCA CTG GAA GAC TTT GAA CAA AGG CTA AAC CAG GCC ATT GAA CGA
T   I   V   S   L   E   D   F   E   Q   R   L   N   Q   A   I   E   R

         605        614        623        632        641        650
AAT GCA TTT TTA GAA AGT GAA CTT GAT GAA AAG GAA TCT TTG TTG GTC TCT GTA
N   A   F   L   E   S   E   L   D   E   K   E   S   L   L   V   S   V

         659        668        677        686        695        704
CAG AGG TTA AAG GAT GAA GCA AGA GAT TTA AGG CAA GAA CTA GCA GTT CGG GAA
Q   R   L   K   D   E   A   R   D   L   R   Q   E   L   A   V   R   E

         713        722        731        740        749        758
AGA CAA CAG GAA GTA ACT AGA AAG TCG GCT CCT AGC TCT CCA ACT CTA GAC TGT
R   Q   Q   E   V   T   R   K   S   A   P   S   S   P   T   L   D   C
```

FIGURE1B

```
        767         776         785         794         803         812
GAA AAG ATG GAC TCC GCC GTC CAA GCA TCA CTT TCT TTG CCA GCT ACC CCT GTT
E   K   M   D   S   A   V   Q   A   S   L   S   L   P   A   T   P   V

        821         830         839         848         857         866
GGC AAA GGA ACG GAG AAC ACT TTT CCT TCA CCG AAA GCT ATA CCA AAT GGT TTT
G   K   G   T   E   N   T   F   P   S   P   K   A   I   P   N   G   F

        875         884         893         902         911         920
GGT ACC AGT CCA CTA ACT CCC TCT GCT AGG ATA TCA GCA CTA AAC ATC GTG GGG
G   T   S   P   L   T   P   S   A   R   I   S   A   L   N   I   V   G

        929         938         947         956         965         974
GAT CTC TTA CGG AAA GTA GGG GCT TTA GAA TCC AAA TTA GCA GCT TGC AGG AAT
D   L   L   R   K   V   G   A   L   E   S   K   L   A   A   C   R   N

        983         992        1001        1010        1019        1028
TTT GCA AAG GAC CAA GCA TCA CGA AAA TCC TAT ATT TCA GGG AAT GTT AAC TGT
F   A   K   D   Q   A   S   R   K   S   Y   I   S   G   N   V   N   C

       1037        1046        1055        1064        1073        1082
GGG GTG CTG AAT GGC AAT GGC ACA AAG TTC TCT CGA TCA GGG CAT ACA TCT TTC
G   V   L   N   G   N   G   T   K   F   S   R   S   G   H   T   S   F

       1091        1100        1109        1118        1127        1136
TTC GAC AAA GGG GCA GTA AAC GGC TTT GAC CCC GCT CCT CCT CCT CCT GGT CTG
F   D   K   G   A   V   N   G   F   D   P   A   P   P   P   P   G   L
```

FIGURE1C

09734669 "44h00

```
      1145        1154        1163        1172        1181        1190
GGC TCC TCG CGT CCA TCG TCA GCG CCG GGT ATG CTG CCT CTC AGT GTG CGA GTG
G   S   S   R   P   S   S   A   P   G   M   L   P   L   S   V   R   V

      1199        1208        1217        1226        1235        1244
CCT AGC CTC CAG GTG GGG GCT CCT GCC CTC CTC CAA CAA CCC AGG ACA CCC ACG
P   S   L   Q   V   G   A   P   A   L   L   Q   Q   P   R   T   P   T

      1253        1262        1271        1280        1289        1298
CCT CAC CCC TCG GTG CCT GGG CCC AGC CCC GTG CCC CTC CGT CTG CCT CCG CAC
P   H   P   S   V   P   G   P   S   P   V   P   L   R   L   P   P   H

      1307        1316        1325        1334        1343        1352
GGC TGG CAG AGG GCA GGC TGC ATG CAG TGG CGG CTA CTG GGC CCT GCC CAG CCC
G   W   Q   R   A   G   C   M   Q   W   R   L   L   G   P   A   Q   P

      1361        1370        1379        1388        1397        1406
CGG AAC TCT GCG CGA TAT CAA TAC TGG CTA TTT TCT CTT CTC GCC GTA GTG CCG
R   N   S   A   R   Y   Q   Y   W   L   F   S   L   L   A   V   V   P

      1415        1424        1433        1442        1451        1460
TTG GTT TCA CAT GAT TGC ACT TTT GTG GGT CGC AAG GTG ATA CAT ACG TGT ATT
L   V   S   H   D   C   T   F   V   G   R   K   V   I   H   T   C   I

      1469        1478        1487        1496        1505        1514
ACT TGG TCA CTG GAT GCA GAA GTA CCC ATT CAT CAC ACC TGC CCC ATA GCC CCC
T   W   S   L   D   A   E   V   P   I   H   H   T   C   P   I   A   P
```

FIGURE1D

```
      1523        1532        1541        1550        1559        1568
ACT CTG CTG TAC TGA TAG GAT TTA GTT GTG TTT TAG GAC ATT GCA AAT CTT CTA
T   L   L   Y

      1577        1586        1595        1604        1613        1622
GAA GTT CTC CCC CAA ATC AGG TCA ATG TGT GCC CTC CTG AGC TCC CAC CCA GGC

      1631        1640        1649        1658        1667        1676
ATC TCC AGT GCT CAT GAT CAT GTG TCC CCC AAC TCC ACC CCT CAC AGT TTG GGC

      1685        1694        1703        1712        1721        1730
CTG TTT CTG GCA AAG AGT CAG GAA GGT TAC TGA ATT AGG GAA CAT TTT CTG CAC

      1739        1748        1757        1766        1775        1784
CTT CTG ATT TTA CTT AAG CAG CTA CCA TTC CAT GGA CTT GCC TCC CAG AGC AGC

      1793        1802        1811        1820        1829        1838
ACA ATG CCC GTC TGA GCC CCA CGT GGC AGG AGC CTC TGG GAC GGG GCA CAC ACA

      1847        1856        1865        1874        1883        1892
GGC CCA GCC TCT GTG CTG TCT CCT CCT CTG TGC GCC TCA GAC TCG GGG TGA GGG

      1901        1910        1919        1928        1937        1946
AGG CGG GCA GCC TCT CGC CAG CCT TCC CGT CCT TCA GTT CAA CGA CAT CTT TGG
```

FIGURE 1E

```
       1955         1964         1973         1982         1991         2000
AGT GTT TTT GTT TTC TCT TCC AAG GGC CGT CCC GTT GTG TTA GGA AGG GTG AGT

       2009         2018         2027         2036         2045         2054
GGC TGG TTC CAG GGT GGG CCG GTG CCA GCT CCG GGG TGG ACT GAA CAG CGG CGG
G   W   F   Q   G   G   P   V   P   A   P   G   W   T   E   Q   R   R

       2063         2072         2081         2090         2099         2108
CTG TCC CTG TGC ATC CTT TGA TTA CTC TCA TGC TGC ATT TAC TGT TTA CAT TTG

       2117         2126         2135         2144         2153         2162
TTT TAT TGT ACA TAG GTT TGT AAA CAT TAT TGC CTG AGA TAT TTG TAT ATA ACT

       2171         2180         2189         2198         2207         2216
TGG GCT TTG TAG CTT TTA TTT ATT CAG AAC GCA TAC GGC ATG TTA ATG ACT CTG

       2225         2234         2243         2252         2261         2270
ATG GTG TCC TCC TCT GGG CAG CTG TAT AGG ATC ATC ATG TGG TTA CAA AAA ATA

       2279         2288         2297         2306         2315         2324
CTT CCC TCA AAA AAA TTC TTT TAA TGT GGA AAC AAT AAA TTT CAC AGA AAA AAA

AAA  3'
```

FIGURE 1F

00hTTT"699ET760

```
                10          19          28          37          46          55
5' CTGA GAG AAG CCT GGT CCA TCT AGT GAG AAT TGA CCT TAT CTC ACT TTC TCT CCC

                64          73          82          91         100         109
   CGC CAG GGT CTG GGA TCC CCA AGG CCT GGG CAG GCA TAG ACT TGA AGG TAC AAC

               118         127         136         145         154         163
   CCC AGG AAC CCC TGG TGC TGA AGG ATG TGG AAA ACA CAG ATT GGC GCC TAC TGC
                                      M   W   K   T   Q   I   G   A   Y   C

               172         181         190         199         208         217
   GGG GTG ACA ACG GAT GTC AGG GTA GAG AGG AAA GAC CCA AAC CAG GTG GAA CTG
   G   V   T   T   D   V   R   V   E   R   K   D   P   N   Q   V   E   L

               226         235         244         253         262         271
   TGG GGA CTC AAG GAA GGC ACC TAC CTG TTC CAG CTG ACA GTG ACT AGC TCA GAC
   W   G   L   K   E   G   T   Y   L   F   Q   L   T   V   T   S   S   D

               280         289         298         307         316         325
   CAC CCA GAG GAC ACG GCC AAC GTC ACA GTC ACT GTG CTG TCC ACC AAG CAG ACA
   H   P   E   D   T   A   N   V   T   V   T   V   L   S   T   K   Q   T

               334         343         352         361         370         379
   GAA GAC TAC TGC CTC GCA TCC AAC AAG GTG GGT CGC CGC TGC CGG GGC TCT TTC
   E   D   Y   C   L   A   S   N   K   V   G   R   R   C   R   G   S   F
```

FIGURE 2A

00hFFF"699ET760

```
         388        397        406        415        424        433
CCG CGC TGG TAC TAT GAC CCC ACG GAG CAG ATC TGC AAG AGT TTC GTT TAT GGA
P   R   W   Y   Y   D   P   T   E   Q   I   C   K   S   F   V   Y   G

         442        451        460        469        478        487
GGC TGC TTG GGC AAC AAG AAC AAC TAC CTT CGG GAA GAA GAG TGC ATT CTA GCC
G   C   L   G   N   K   N   N   Y   L   R   E   E   E   C   I   L   A

         496        505        514        523        532        541
TGT CGG GGT GTG CAA GGT GGG CCT TTG AGA GGC AGC TCT GGG GCT CAG GCG ACT
C   R   G   V   Q   G   G   P   L   R   G   S   S   G   A   Q   A   T

         550        559        568        577        586        595
TTC CCC CAG GGC CCC TCC ATG GAA AGG CGC CAT CCA GTG TGC TCT GGC ACC TGT
F   P   Q   G   P   S   M   E   R   R   H   P   V   C   S   G   T   C

         604        613        622        631        640        649
CAG CCC ACC CAG TTC CGC TGC AGC AAT GGC TGC TGC ATC GAC AGT TTC CTG GAG
Q   P   T   Q   F   R   C   S   N   G   C   C   I   D   S   F   L   E

         658        667        676        685        694        703
TGT GAC GAC ACC CCC AAC TGC CCC GAC GCC TCC GAC GAG GCT GCC TGT GAA AAA
C   D   D   T   P   N   C   P   D   A   S   D   E   A   A   C   E   K

         712        721        730        739        748        757
TAC ACG AGT GGC TTT GAC GAG CTC CAG CGC ATC CAT TTC CCC AGT GAC AAA GGG
Y   T   S   G   F   D   E   L   Q   R   I   H   F   P   S   D   K   G
```

FIGURE2B

00hTTT"699ET760

```
         766        775        784        793        802        811
CAC TGC GTG GAC CTG CCA GAC ACA GGA CTC TGC AAG GAG AGC ATC CCG CGC TGG
H   C   V   D   L   P   D   T   G   L   C   K   E   S   I   P   R   W

         820        829        838        847        856        865
TAC TAC AAC CCC TTC AGC GAA CAC TGC GCC CGC TTT ACC TAT GGT GGT TGT TAT
Y   Y   N   P   F   S   E   H   C   A   R   F   T   Y   G   G   C   Y

         874        883        892        901        910        919
GGC AAC AAG AAC AAC TTT GAG GAA GAG CAG CAG TGC CTC GAG TCT TGT CGC GGC
G   N   K   N   N   F   E   E   E   Q   Q   C   L   E   S   C   R   G

         928        937        946        955        964        973
ATC TCC AAG AAG GAT GTG TTT GGC CTG AGG CGG GAA ATC CCC ATT CCC AGC ACA
I   S   K   K   D   V   F   G   L   R   R   E   I   P   I   P   S   T

         982        991       1000       1009       1018       1027
GGC TCT GTG GAG ATG GCT GTC GCA GTG TTC CTG GTC ATC TGC ATT GTG GTG GTG
G   S   V   E   M   A   V   A   V   F   L   V   I   C   I   V   V   V

        1036       1045       1054       1063       1072       1081
GTA GCC ATC TTG GGT TAC TGC TTC TTC AAG AAC CAG AGA AAG GAC TTC CAC GGA
V   A   I   L   G   Y   C   F   F   K   N   Q   R   K   D   F   H   G

        1090       1099       1108       1117       1126       1135
CAC CAC CAC CAC CCA CCA CCC ACC CCT GCC AGC TCC ACT GTC TCC ACT ACC GAG
H   H   H   H   P   P   P   T   P   A   S   S   T   V   S   T   T   E
```

FIGURE2C

00hTTT"69ET260

```
      1144        1153        1162        1171        1180        1189
GAC ACG GAG CAC CTG GTC TAT AAC CAC ACC ACC CGG CCC CTC TGA GCC TGG GTC
D   T   E   H   L   V   Y   N   H   T   T   R   P   L

      1198        1207        1216        1225        1234        1243
TCA CCG GCT CTC ACC TGG CCC TGC TTC CTG CTT GCC AAG GCA GAG GCC TGG GCT

      1252        1261        1270        1279        1288        1297
GGG AAA AAC TTT GGA ACC AGA CTC TTG CCT GTT TCC CAG GCC CAC TGT GCC TCA

      1306        1315        1324        1333        1342        1351
GAG ACC AGG GCT CCA GCC CCT CTT GGA GAA GTC TCA GCT AAG CTC ACG TCC TGA

      1360        1369        1378        1387        1396        1405
GAA AGC TCA AAG GTT TGG AAG GAG CAG AAA ACC CTT GGG CCA GAA GTA CCA GAC

      1414        1423        1432        1441        1450        1459
TAG ATG GAC CTG CCT GCA TAG GAG TTT GGA GGA AGT TGG AGT TTT GTT TCC TCT

      1468        1477        1486        1495        1504        1513
GTT CAA AGC TGC CTG TCC CTA CCC CAT GGT GCT AGG AAG AGG AGT GGG GTG GTG
```

FIGURE 2D

00hTTT"699ET760

```
      1522        1531        1540        1549        1558        1567
TCA GAC CCT GGA GGC CCC AAC CCT GTC CTC CCG AGC TCC TCT TCC ATG CTG TGC

      1576        1585        1594        1603        1612        1621
GCC CAG GGC TGG GAG GAA GGA CTT CCC TGT GTA GTT TGT GCT GTA AAG AGT TGC

      1630        1639        1648        1657        1666        1675
TTT TTG TTT ATT TAA TGC TGT GGC ATG GGT GAA GAG GAG GGG AAG AGG CCT GTT

      1684        1693        1702        1711        1720        1729
TGG CCT CTC TGT CCT CTC TTC CTC TTC CCC CAA GAT TGA GCT CTC TGC CCT TGA

      1738        1747        1756        1765        1774        1783
TCA GCC CCA CCC TGG CCT AGA CCA GCA GAC AGA GCC AGG AGA GGC TCA GCT GCA

      1792        1801        1810        1819        1828        1837
TTC CGC AGC CCC CAC CCC CAA GGT TCT CCA ACA TCA CAG CCC AGC CCA CCC ACT

      1846        1855        1864
GGG TAA TAA AAG TGG TTT GTG GAA AAA AAA AAA  3'
```

FIGURE 2E

00hTTT"699ET260

```
                10          19          28          37          46          55
5' GTTT TGG CGC ATG GGC GGA GCG TAG TTA CGG TCG ACT GGG GCG TCG TCC CTA GCC

                64          73          82          91         100         109
   CGG GAG CCG GGT CTC TGG AGT CGC GGC CCG GGG TTC ACG ATG TCC GAC GAG GAA
                                                       M   S   D   E   E

              118         127         136         145         154         163
   GCG AGG CAG AGC GGA GGC TCC TCG CAG GCC GGC GCC GTG ACT GTC AGC GAC GTC
   A   R   Q   S   G   G   S   S   Q   A   G   A   V   T   V   S   D   V

              172         181         190         199         208         217
   CAG GAG CTG ATG CGG CGC AAG GAG GAG ATA GAA GCG CAG ATC AAG GCC AAC TAT
   Q   E   L   M   R   R   K   E   E   I   E   A   Q   I   K   A   N   Y

              226         235         244         253         262         271
   GAC GTG CTG GAA AGC CAA AAA GGC ATT GGG ATG AAC GAG CCG CTG GTG GAC TGT
   D   V   L   E   S   Q   K   G   I   G   M   N   E   P   L   V   D   C

              280         289         298         307         316         325
   GAG GGC TAC CCC CGG TCA GAC GTG GAC CTG TAC CAA GTC CGC ACC GCC AGG CAC
   E   G   Y   P   R   S   D   V   D   L   Y   Q   V   R   T   A   R   H

              334         343         352         361         370         379
   AAC ATC ATA TGC CTG CAG AAT GAT CAC AAG GCA GTG ATG AAG CAG GTG GAG GAG
   N   I   I   C   L   Q   N   D   H   K   A   V   M   K   Q   V   E   E
```

FIGURE 3A

00hTTF"699ET760

```
         388        397        406        415        424        433
GCC CTG CAC CAG CTG CAC GCT CGC GAC AAG GAG AAG CAG GCC CGG GAC ATG GCT
A   L   H   Q   L   H   A   R   D   K   E   K   Q   A   R   D   M   A

         442        451        460        469        478        487
GAG GCC CAC AAA GAG GCC ATG AGC CGC AAA CTG GGT CAG AGT GAG AGC CAG GGC
E   A   H   K   E   A   M   S   R   K   L   G   Q   S   E   S   Q   G

         496        505        514        523        532        541
CCT CCA CGG GCC TTC GCC AAA GTG AAC AGC ATC AGC CCC GGC TCC CCA GCC AGC
P   P   R   A   F   A   K   V   N   S   I   S   P   G   S   P   A   S

         550        559        568        577        586        595
ATC GCG GGT AAT CCA GGG GTT GGC CAC TCA AGT CCA TGC CCA GGG GAC ACG GGT
I   A   G   N   P   G   V   G   H   S   S   P   C   P   G   D   T   G

         604        613        622        631        640        649
CTG CAA GTG GAT GAT GAG ATT GTG GAG TTC GGC TCT GTG AAC ACC CAG AAC TTC
L   Q   V   D   D   E   I   V   E   F   G   S   V   N   T   Q   N   F

         658        667        676        685        694        703
CAG TCA CTG CAT AAC ATT GGC AGT GTG GTG CAG CAC AGT GAG GGG AAG CCC CTG
Q   S   L   H   N   I   G   S   V   V   Q   H   S   E   G   K   P   L

         712        721        730        739        748        757
AAT GTG ACA GTG ATC CGC AGG GGG GGA AAA CAC CAG CTT AGA CTT GTT CCA ACA
N   V   T   V   I   R   R   G   G   K   H   Q   L   R   L   V   P   T
```

FIGURE3B

00tTTT"699ET260

```
        766         775         784         793         802         811
CGC TGG GCA GGA AAA GGA CTG CTG GGC TGC AAC ATT ATT CCT CTG CAA AGA TGA
R   W   A   G   K   G   L   L   G   C   N   I   I   P   L   Q   R

        820         829         838         847         856         865
TTG TCC CTG GGG AAC AGT AAC AGG AAA GCA TCT TCC CTT GCC CTG GAC TTG GGT

        874         883         892         901         910         919
CTA GGG ATT TCC AAC TTG TCT TCT CTC CCT GAA GCA TAA GGA TCT GGA AGA GGC

        928         937         946         955         964         973
TTG TAA CCT GAA CTT CTG TGT GGT GGC AGT ACT GTG GCC CAC CAG TGT AAT CTC

        982         991        1000        1009        1018        1027
CCT GGA TTA AGG CAT TCT TAA AAA CTT AGG CTT GGC CTC TTT CAC AAA TTA GGC

       1036        1045        1054        1063        1072        1081
CAC GGC CCT AAA TAG GAA TTC CCT GGA TTG TGG GCA AGT GGG CGG AAG TTA TTC

       1090        1099        1108        1117        1126        1135
TGG CAG GTA CTG GTG TGA TTA TTA TTA TTA TTT TTA ATA AAG AGT TTT ACA GTG


CTG  3'
```

FIGURE 3C

00hFFF"699ET260

```
                10          19          28          37          46          55
5' CGAG CCC GGA GGC CAG ATG AGC GGA CAC AGC CCC ACG CGC GGG GCC ATG CAG GTA

                64          73          82          91         100         109
   AGT GGC TCC CGA CGG CCC CAC TTG AAT TTC GAT CCC AGA CCG GGT CCG GCG CCC

               118         127         136         145         154         163
   TCC GGG GCC CAA GCT TAG CGC GGT GCT GCA GTG GGG CCG CCT GAC CCA AAG CGA

               172         181         190         199         208         217
   AAC CGA AAG CCC CGC GGA GGG TGA CCT GAC GAC TTT CCC GGG ACT GGA AGG GGG

               226         235         244         253         262         271
   AGT CCT GCG AGA GAC TAG GTG GCC ATG AAC GGT AAG GCC CGC AAA GAG GCG GTG
                                   M   N   G   K   A   R   K   E   A   V

               280         289         298         307         316         325
   CAG ACT GCG GCT AAG GAA CTC CTC AAG TTC GTG AAC CGG AGT CCC TCT CCT TTC
   Q   T   A   A   K   E   L   L   K   F   V   N   R   S   P   S   P   F

               334         343         352         361         370         379
   CAT GCT GTG GCT GAA TGC CGC AAC CGC CTT CTC CAG GCT GGC TTC AGT GAA CTC
   H   A   V   A   E   C   R   N   R   L   L   Q   A   G   F   S   E   L
```

FIGURE 4A

```
         388        397        406        415        424        433
AAG GAG ACT GAG AAA TGG AAT ATT AAG CCC GAG AGC AAG TAC TTC ATG ACC AGG
K   E   T   E   K   W   N   I   K   P   E   S   K   Y   F   M   T   R

         442        451        460        469        478        487
AAC TCC TCC ACC ATC ATA GCT TTT GCT GTA GGG GGC CAG TAC GTT CCT GGC AAT
N   S   S   T   I   I   A   F   A   V   G   G   Q   Y   V   P   G   N

         496        505        514        523        532        541
GGC TTC AGC CTC ATC GGG GCC CAC ACG GAC AGC CCC TGC CTC CGG GTG AAA CGT
G   F   S   L   I   G   A   H   T   D   S   P   C   L   R   V   K   R

         550        559        568        577        586        595
CGG TCT CGC CGC AGC CAG GTG GGC TTC CAG CAA GTC GGT GTG GAG ACC TAT GGT
R   S   R   R   S   Q   V   G   F   Q   Q   V   G   V   E   T   Y   G

         604        613        622        631        640        649
GGT GGG ATC TGG AGC ACC TGG TTT GAC CGT GAC CTG ACT CTG GCT GGA CGC GTC
G   G   I   W   S   T   W   F   D   R   D   L   T   L   A   G   R   V

         658        667        676        685        694        703
ATT GTC AAG TGC CCT ACC TCA GGT CGG CTG GAG CAG CAG CTG GTG CAC GTG GAG
I   V   K   C   P   T   S   G   R   L   E   Q   Q   L   V   H   V   E

         712        721        730        739        748        757
CGG CCC ATT CTT CGC ATC CCA CAC CTG GCC ATC CAT CTG CAG CGA AAT ATC AAC
R   P   I   L   R   I   P   H   L   A   I   H   L   Q   R   N   I   N
```

FIGURE 4B

```
          766         775         784         793         802         811
GAG AAC TTT GGG CCC AAC ACA GAG ATG CAT CTA GTC CCC ATT CTT GCC ACA GCC
E   N   F   G   P   N   T   E   M   H   L   V   P   I   L   A   T   A

          820         829         838         847         856         865
ATC CAG GAG GAG CTG GAG AAG GGG ACT CCT GAG CCA GGG CCT CTC AAT GCT GTG
I   Q   E   E   L   E   K   G   T   P   E   P   G   P   L   N   A   V

          874         883         892         901         910         919
GAT GAG CGG CAC CAT TCG GTC CTC ATG TCC CTG CTC TGT GCC CAT CTG GGG CTG
D   E   R   H   H   S   V   L   M   S   L   L   C   A   H   L   G   L

          928         937         946         955         964         973
AGC CCC AAG GAC ATA GTG GAG ATG GAG CTC TGC CTT GCA GAC ACC CAG CCT GCG
S   P   K   D   I   V   E   M   E   L   C   L   A   D   T   Q   P   A

          982         991        1000        1009        1018        1027
GTC TTG GGT GGT GCC TAT GAT GAG TTC ATC TTT GCT CCT CGG CTG GAC AAT CTG
V   L   G   G   A   Y   D   E   F   I   F   A   P   R   L   D   N   L

        1036        1045        1054        1063        1072        1081
CAC AGC TGC TTC TGT GCC CTG CAG GCC TTG ATA GAT TCC TGT GCA GGC CCT GGC
H   S   C   F   C   A   L   Q   A   L   I   D   S   C   A   G   P   G

        1090        1099        1108        1117        1126        1135
TCC CTG GCC ACA GAG CCT CAC GTG CGC ATG GTC ACA CTC TAT GAC AAC GAA GAG
S   L   A   T   E   P   H   V   R   M   V   T   L   Y   D   N   E   E
```

FIGURE 4C

```
1144                1153                1162                1171                1180                1189
GTG GGG TCT GAG AGT GCA CAG GGA GCA CAG TCA CTG CTG ACA GAG CTG GTG CTG
V   G   S   E   S   A   Q   G   A   Q   S   L   L   T   E   L   V   L

1198                1207                1216                1225                1234                1243
CGG CGG ATC TCA GCC TCG TGC CAG CAC CCG ACA GCC TTC GAG GAA GCC ATA CCC
R   R   I   S   A   S   C   Q   H   P   T   A   F   E   E   A   I   P

1252                1261                1270                1279                1288                1297
AAG TCC TTC ATG ATC AGC GCA GAC ATG GCC CAT GCT GTG CAT CCC AAC TAC CTG
K   S   F   M   I   S   A   D   M   A   H   A   V   H   P   N   Y   L

1306                1315                1324                1333                1342                1351
GAC AAG CAT GAG GAG AAC CAC CGG CCT TTA TTC CAC AAG GGC CCC GTG ATC AAG
D   K   H   E   E   N   H   R   P   L   F   H   K   G   P   V   I   K

1360                1369                1378                1387                1396                1405
GTG AAC AGC AAG CAA CGC TAT GCT TCA AAC GCG GTG TCA GAG GCC CTG ATC CGA
V   N   S   K   Q   R   Y   A   S   N   A   V   S   E   A   L   I   R

1414                1423                1432                1441                1450                1459
GAG GTG GCC AAC AAA GTC AAG GTC CCC CTG CAG GAT CTC ATG GTC CGG AAT GAC
E   V   A   N   K   V   K   V   P   L   Q   D   L   M   V   R   N   D

1468                1477                1486                1495                1504                1513
ACC CCC TGT GGA ACC ACC ATT GGA CCT ATC TTG GCT TCT CGG CTG GGG CTG CGG
T   P   C   G   T   T   I   G   P   I   L   A   S   R   L   G   L   R
```

FIGURE 4D

```
      1522        1531        1540        1549        1558        1567
GTG CTG GAT TTA GGC AGC CCC CAA CTG GCC ATG CAC TCT ATC CGG GAG ATG GCC
V   L   D   L   G   S   P   Q   L   A   M   H   S   I   R   E   M   A

      1576        1585        1594        1603        1612        1621
TGC ACC ACA GGA GTC CTC CAG ACC CTC ACC CTC TTC AAG GGC TTC TTT GAG CTG
C   T   T   G   V   L   Q   T   L   T   L   F   K   G   F   F   E   L

      1630        1639        1648        1657        1666        1675
TTC CCT TCT CTA AGC CAT AAT CTC TTA GTG GAT TGA GCC CTC TTG GAA AGA CTT
F   P   S   L   S   H   N   L   L   V   D

      1684        1693        1702        1711        1720        1729
CTC TGC CAT CCC TTT GCA CCT GAG AGG GGA AGT TCT CAG CTG AGC TGA AGC TGG

      1738        1747        1756        1765        1774        1783
ATT ATT AAA GTG GAT TGT CAC TCA GAC TCT CCG TGC TAC GCT TAT TTG GAG ACT

      1792        1801        1810        1819        1828        1837
AGA GGA GTG GGA GTT GAG CCT GGC TTG AAC CTT TGG AAC CAG AAA AGT TGG GGA

      1846        1855        1864        1873        1882        1891
GCA GGT GGA GGA GGC CAC ACT CCT GGG AGC TGA TGG TTT TAA ATC TGG TTT TAA

      1900        1909
ATC TCA AAA AAA AAA AAA A 3'
```

FIGURE 4E

```
1   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 031381
1   K P A C S S V R L T T R E K P H C V C Q D P M T C P P A K L GI 2827886

1   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 031381
31  L D Q V C G T D N Q T Y T S S C Y L F A T K C K L E G T K K GI 2827886

1   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 031381
61  G H Q L Q L I T W S L Q I Y P A C T D F E V T Q F P L R M R GI 2827886

1   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 031381
91  D W L K N I S C S C M N L T L N T L D I S T R S R E T K S R GI 2827886

1   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 031381
121 K S T W M K K R L L A G D H P I D L L L R E H R A T S R F G GI 2827886

1   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 031381
151 Q V R Q L L T C R G G A G C R G A R S G A Q G C G G N G A E GI 2827886

1   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 031381
181 R L G R P G Q A S G A E A S V S R R R T C A F D T L E A F L GI 2827886
```

FIGURE 5A

00hTTT"69ET760

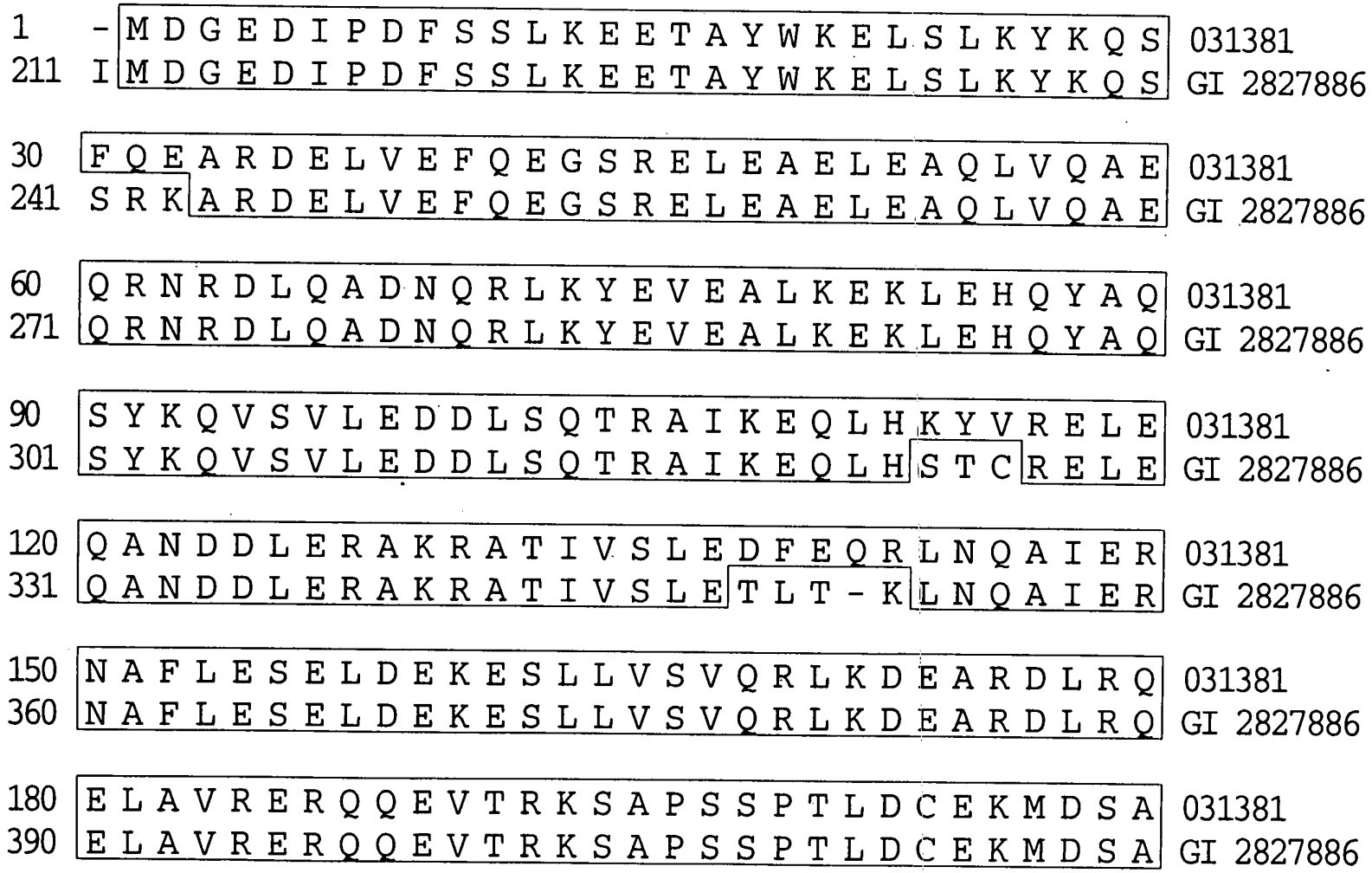


FIGURE 5B

```
210  V Q A S L S L P A T P V G K G T E N T F P S P K A I P N G F  031381
420  V Q A S L S L P A T P V G K G T E N S F P S P K A I P N G F  GI 2827886

240  G T S P L T P S A R I S A L N I V G D L L R K V G A L E S K  031381
450  G T S P L T P S A R I S A L N I V G D L L R K V G A L E S K  GI 2827886

270  L A A C R N F A K D Q A S R K S Y I S G N V N C G V L N G N  031381
480  L A A C R N F A K D Q A S R K S Y I S G N V N C G V M N S N  GI 2827886

300  G T K F S R S G H T S F F D K G A V N G F D P A P P P P G L  031381
510  G T K F S R S G H.T S F F D K G A V N G F D P A P P P P G L  GI 2827886

330  G S S R P S S A P G M L P L S V R V P S L Q V G A P A L L Q  031381
540  G S S R P L S A P G M C R S V C E C P A - - S G A P A L L Q  GI 2827886

360  Q P R T P T P H P S V P G P S P V P L R L P P H G W Q R A G  031381
568  Q P R T P T P H P S V P G P A L C P P S A S P H G W Q R A G  GI 2827886
```

FIGURE 5C

00hFFF"699ET760

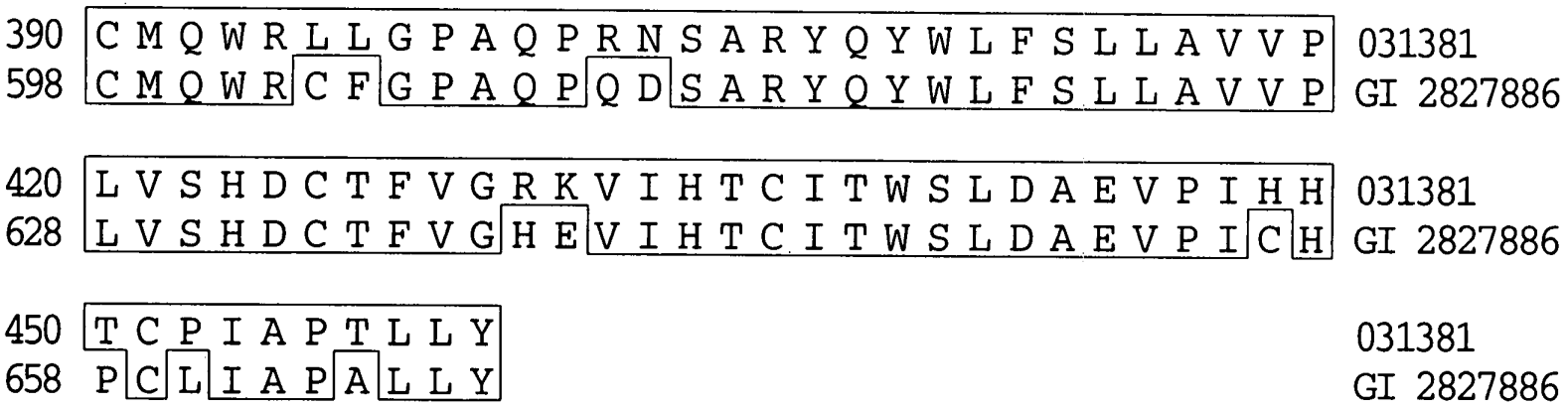


FIGURE 5D

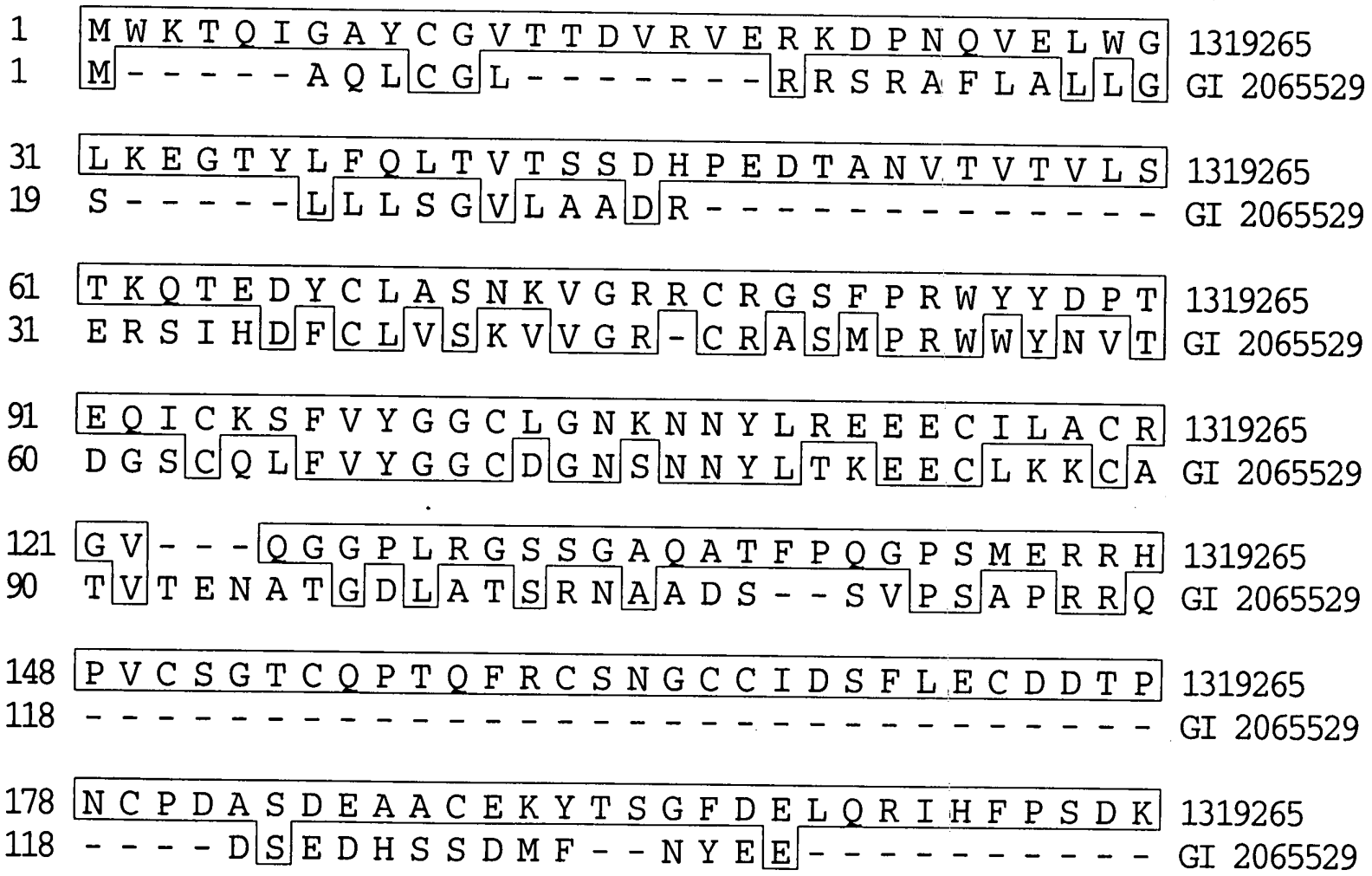

1 MWKTQIGAYCGVTTDVRVERKDPNQVELWG 1319265
1 M------AQLCGL--------RRSRAFLALLG GI 2065529
31 LKEGTYLFQLTVTSSDHPEDTANVTVTVLS 1319265
19 S------LLLSGVLAADR---------------- GI 2065529
61 TKQTEDYCLASNKVGRRCRGSFPRWYYDPT 1319265
31 ERSIHDFCLVSKVVGR-CRASMPRWWYNVT GI 2065529
91 EQICKSFVYGGCLGNKNNYLREEECILACR 1319265
60 DGSCQLFVYGGCDGNSNNYLTKEECLKKCA GI 2065529
121 GV---QGGPLRGSSGAQATFPQGPSMERRH 1319265
90 TVTENATGDLATSRNAADS--SVPSAPRRQ GI 2065529
148 PVCSGTCQPTQFRCSNGCCIDSFLECDDTP 1319265
118 ---------------------------- GI 2065529
178 NCPDASDEAACEKYTSGFDELQRIHFPSDK 1319265
118 ----DSEDHSSDMF--NYEE---------- GI 2065529

FIGURE 6A

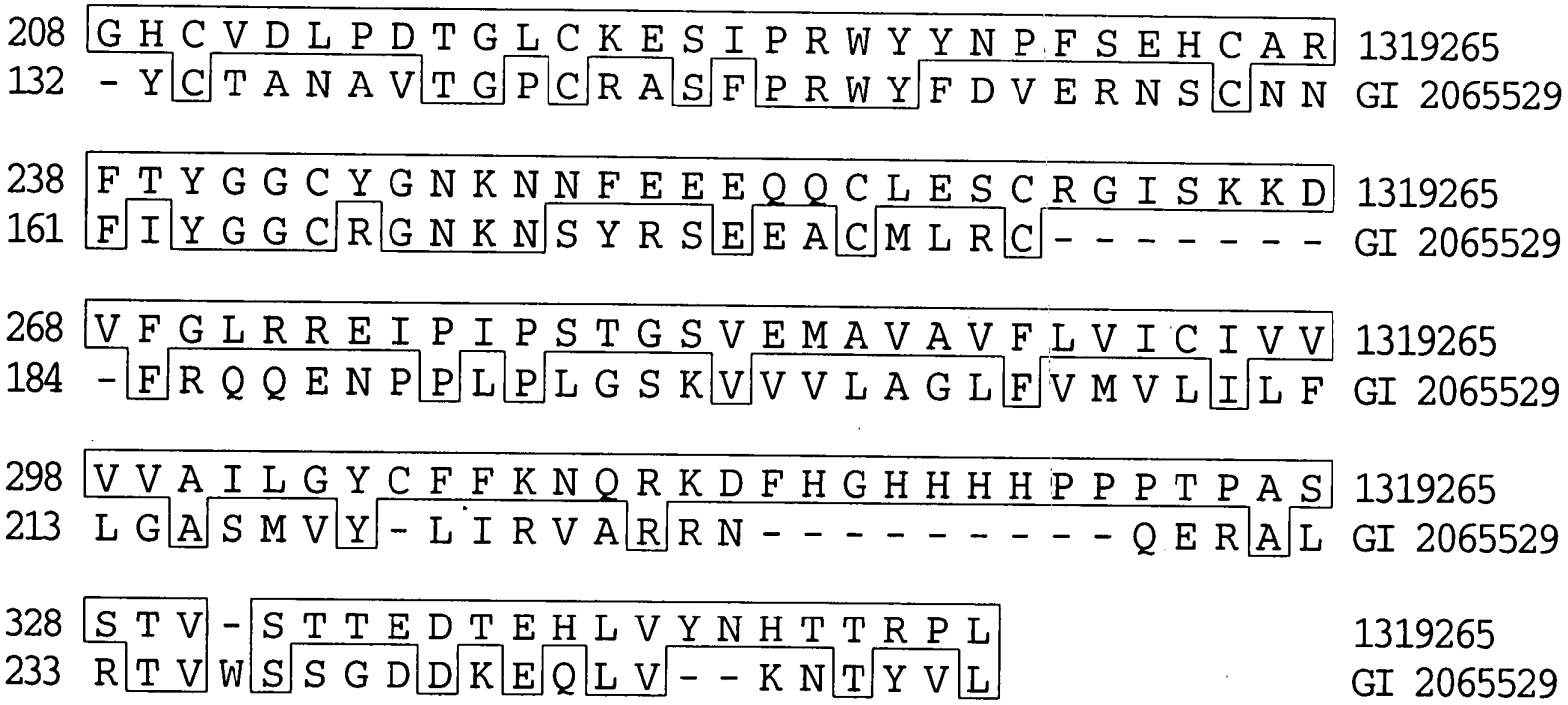

208 GHCVDLPDTGLCKESIPRWYYNPFSEHCAR 1319265
132 -YCTANAVTGPCRASFPRWYFDVERNSCNN GI 2065529
238 FTYGGCYGNKNNFEEEQQCLESCRGISKKD 1319265
161 FIYGGCRGNKNSYRSEEACMLRC------- GI 2065529
268 VFGLRREIPIPSTGSVEMAVAVFLVICIVV 1319265
184 -FRQQENPPLPLGSKVVVLAGLFVMVLILF GI 2065529
298 VVAILGYCFFKNQRKDFHGHHHHPPPTPAS 1319265
213 LGASMVY-LIRVARRN----------QERAL GI 2065529
328 STV-STTEDTEHLVYNHTTRPL 1319265
233 RTVWSSGDDKEQLV--KNTYVL GI 2065529

FIGURE 6B

00hFFF"699ET760

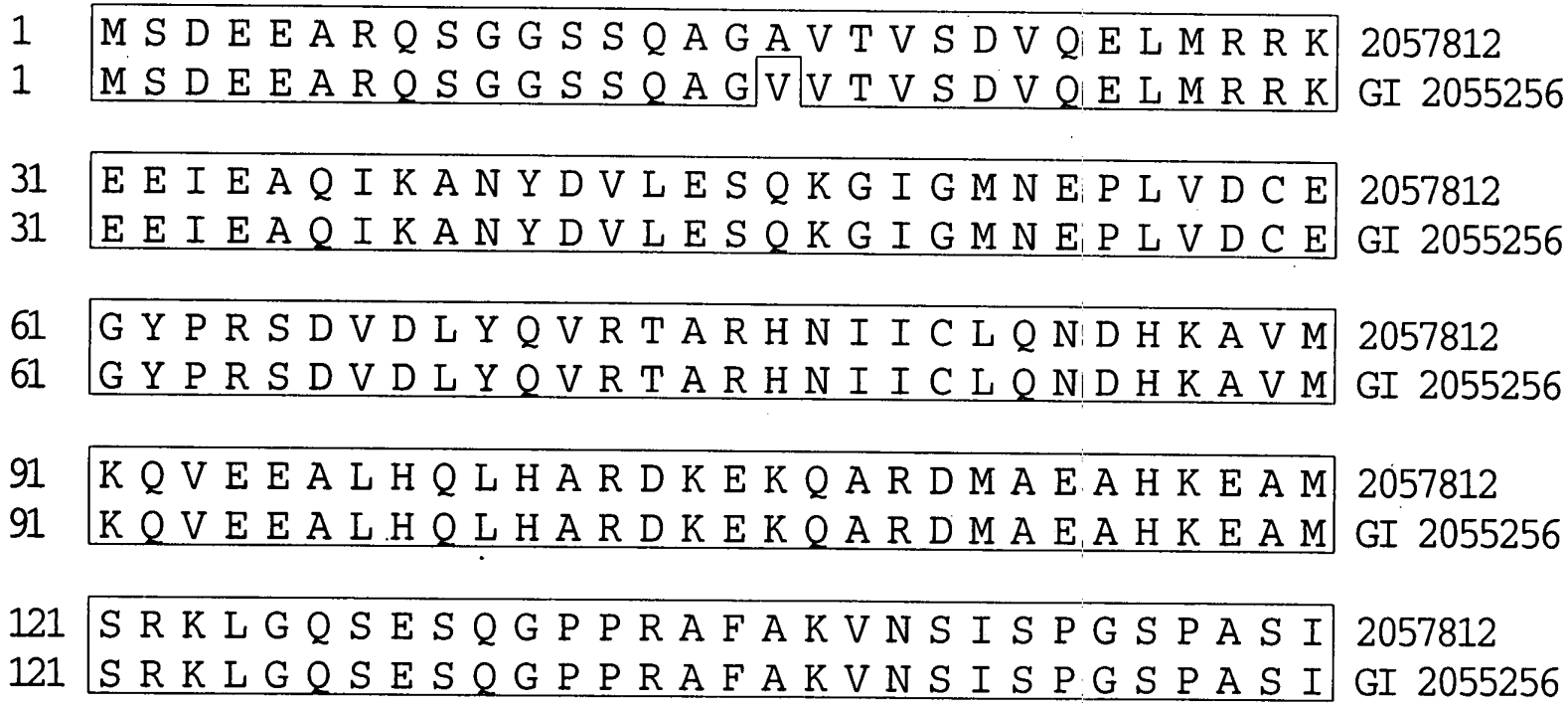


FIGURE 7A

09hTTT"699ET260

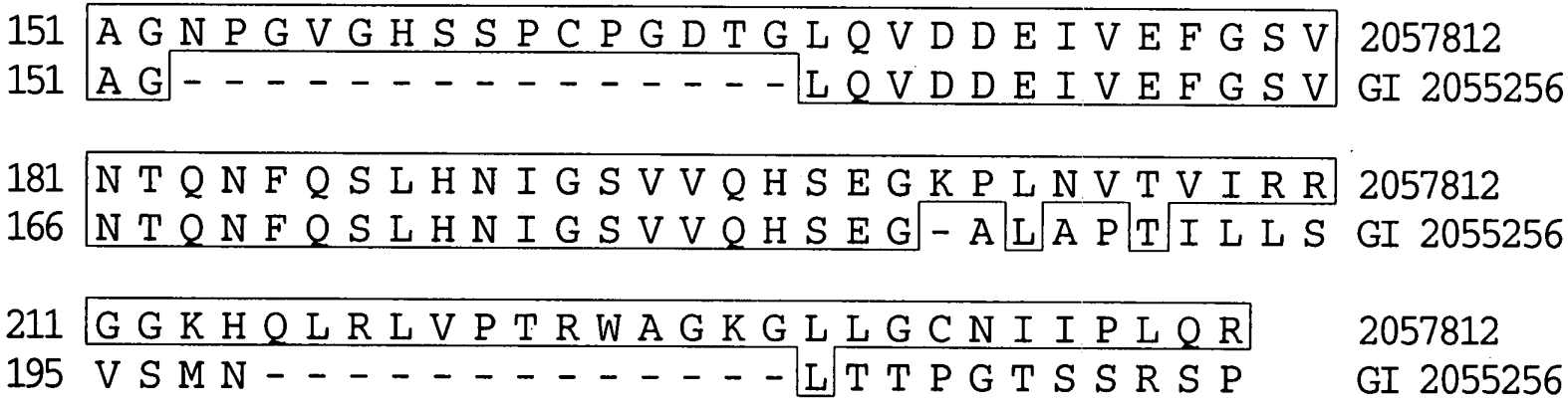


FIGURE 7B

08TET 6SET50

```
1    MNG--KARKEAVQTAAKELLKFVNRSPSPF  2058485
1    MAALKPSAPEIRKAAQEFINYLNKAVTPF  GI 529706

29   HAVAECRNRLLQAGFSELKETEKWNIKPES  2058485
31   HATQEVKDRLLQAGFTELPESGHWDIQPTS  GI 529706

59   KYFMTRNSSTIIAFAVGGQYVPGNGFSLIG  2058485
61   KYFVTKNRSAILAFAVGGSYKPGSGFSIVV  GI 529706

89   AHTDSPCLRVKRRSRRSQVGFQQVGVETYG  2058485
91   GHTDSPCLRVKPISHQKSDKFLQVGVSTYG  GI 529706

119  GGIWSTWFDRDLTLAGRVIVKCPTSGRLEQ  2058485
121  GGIWRTWFDRDLSVAGLVIVK--NGEKLQH  GI 529706

149  QLVHVERPILRIPHLAIHLQRNINENFGPN  2058485
149  KLIDVKKPVLFIPNLAIHLETD-RTTFKPN  GI 529706
```

FIGURE 8A

09713569 "44H00

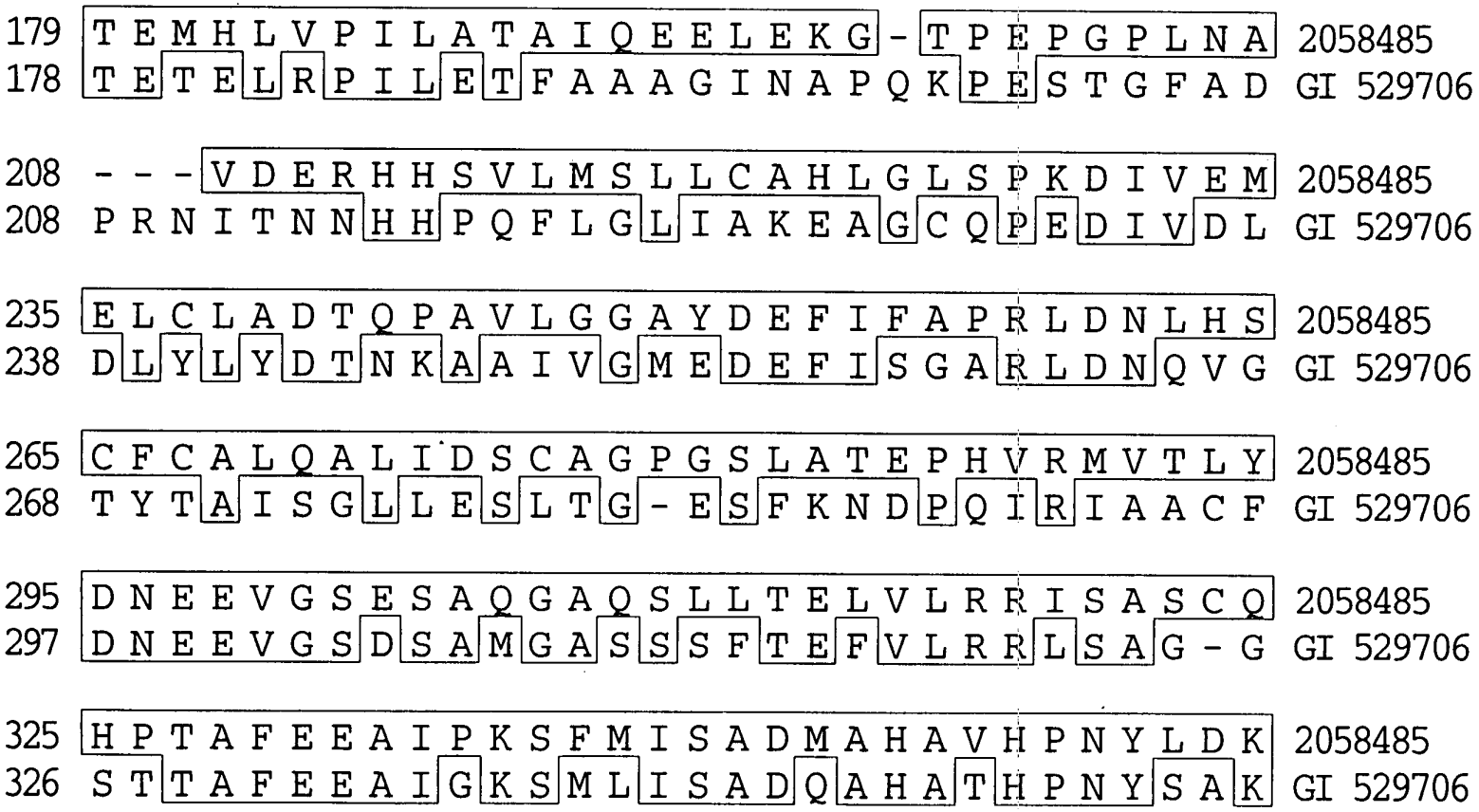


FIGURE 8B

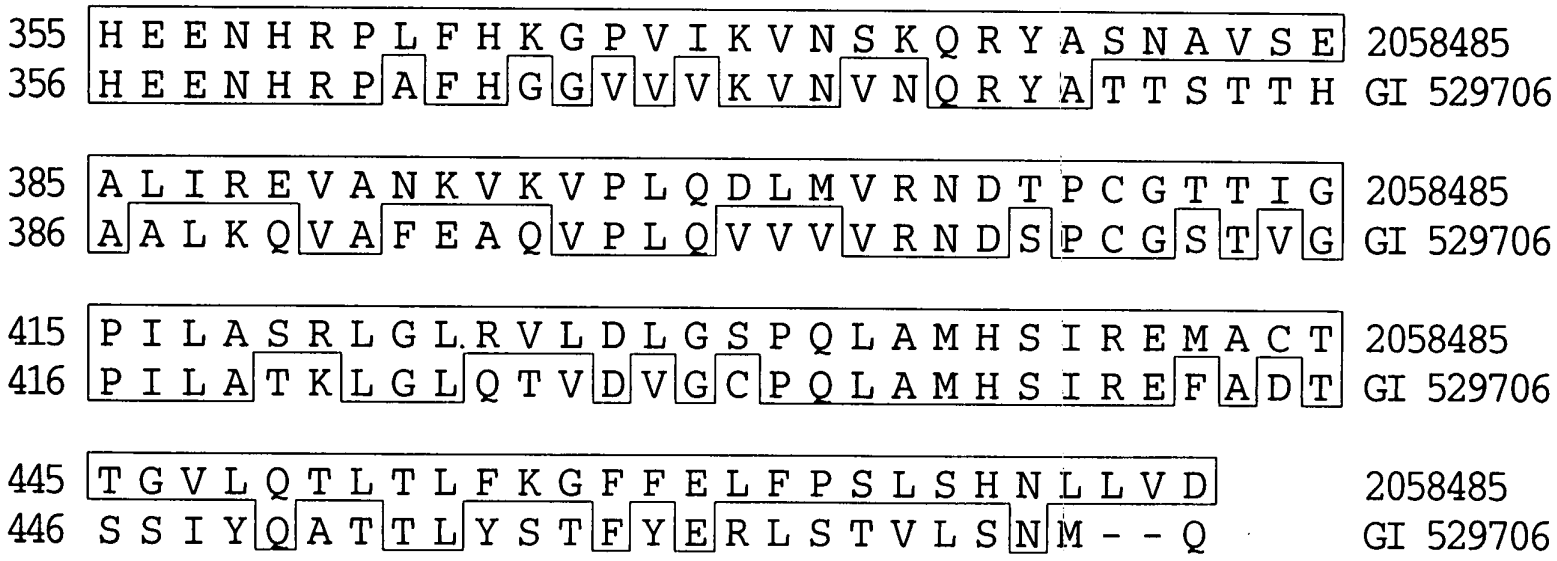

355 H E E N H R P L F H K G P V I K V N S K Q R Y A S N A V S E 2058485
356 H E E N H R P A F H G G V V V K V N V N Q R Y A T T S T T H GI 529706
385 A L I R E V A N K V K V P L Q D L M V R N D T P C G T T I G 2058485
386 A A L K Q V A F E A Q V P L Q V V V V R N D S P C G S T V G GI 529706
415 P I L A S R L G L R V L D L G S P Q L A M H S I R E M A C T 2058485
416 P I L A T K L G L Q T V D V G C P Q L A M H S I R E F A D T GI 529706
445 T G V L Q T L T L F K G F F E L F P S L S H N L L V D 2058485
446 S S I Y Q A T T L Y S T F Y E R L S T V L S N M - - Q GI 529706

FIGURE 8C